

White grubs (*Lachnosterna* spp.). The award to birds of first place among natural enemies of white grubs, cited in 'The Auk' (Vol. 30, No. 4, Oct., 1913, p. 602) is repeated in a revision of the bulletin<sup>1</sup> there quoted. Added information is to the effect that: "The U. S. Biological Survey has found these insects in the stomachs of 78 species of birds and 2 species of toads.

Insects that carry stock diseases. The writer cannot forbear to add another to the contributions he has made to the discussion of the distribution of stock diseases. In the very first article on the subject,<sup>2</sup> the statement was made, regarding anthrax, that "The fact that the disease may be carried by flies is more than sufficient to explain the most severe epidemics" (p. 298). The author of one of the papers reviewed at that time now has published the results of further experimentation and reports<sup>3</sup> the positive findings that the horn fly, horse flies and mosquitos are capable of transmitting anthrax by feeding upon a healthy animal after biting an infected one. In the face of such evidence, of which much was available years ago, the waging of a severe campaign against Turkey Buzzards as the most important carriers of stock diseases, is a deplorable example of popular disregard of scientific teachings.—W. L. M.

**Centurus radiolatus in relation to Cocoa in Jamaica.**—The Jamaica Woodpecker has been the subject of many complaints of doing damage to cocoa pods. The matter has been investigated by Mr. A. H. Ritchie, Government Entomologist, and his report has recently been published.<sup>4</sup> By stomach analysis and field observation he finds that the normal food of the bird is fruit pulp, seeds and insects. Most of these items were specifically identified and lists of the names are given. Mr. Ritchie found no direct evidence of damage to cocoa, a conclusion supported by letters reproduced in the previous issue of the Journal (22, No. 2, February, 1918, pp. 65-69). Two or three writers state that they have long had standing rewards for woodpeckers with remains of cocoa pods or seeds in their crops, but have never had a bird presented. One of these writers also gives a number of stomach analyses. The investigation so far as it has proceeded, is clearly in favor of the Jamaica Woodpecker and the burden of proof of damage done rests upon the accusers.—W. L. M.

**Further Notes on Possible Avian Distribution of Hog Cholera.**—The full report of the experimental investigations of the distribution of hog

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<sup>1</sup> Davis, J. J. Common White Grubs. Farmers' Bull. 940, U. S. Dept. Agr., May, 1918, p. 12.

<sup>2</sup> 'The Auk,' 30, No. 2, April, 1913, pp. 295-8. Succeeding articles are in Vol. 35, No. 2, April 1918, pp. 253-4 and in Farmers' Bull. 755, U. S. Dept. Agr., Oct. 26, 1916, pp. 37-9.

<sup>3</sup> Morris, Harry. Blood-sucking Insects as Transmitters of Anthrax or Charbon. Bull. 163, La. Agr. Exp. Sta., March 1918, p. 15.

<sup>4</sup> Journ. Jamaica Agr. Soc. 22, No. 3, March 1918, pp. 102-107. Issued separately and repaged 1-6.

cholera by pigeons, that was noticed in the last issue of 'The Auk,'<sup>1</sup> has now been published.<sup>2</sup> No further comment on the experiments is necessary except to state that the conditions were exceedingly severe and that the authors would have been justified in concluding that pigeons, and any other birds of similar habits, probably never are concerned in the spread of hog cholera.

Other experiments reported on in the same publication (pp. 102-115) are of interest in connection with the study of carrion feeders as distributors of the disease. One of the findings is that "fresh collected secretions and excreta [of the hogs] proved to be non-infectious when fed," with one possible exception. This disposes of one theory to the effect that buzzards may get the virus from hog droppings and distribute it. It was also shown that the flesh of rats which were fed on the meat of cholera hogs for periods up to three weeks was non-infectious when fed to susceptible animals. These findings, if of general application, so narrow the possibilities of transmission of hog cholera by carrion feeders, that there is no doubt a great mistake has been made in pronouncing buzzards guilty and even condemning them by statute, in advance of thorough and careful investigation of their relation to stock diseases.—W. L. M.

**Recent Publications on Economic Ornithology.**—The Biological Survey of the U. S. Department of Agriculture has issued its usual 'Directory of Officials and Organizations Concerned with the Protection of Birds and Game,'<sup>3</sup> compiled this year by W. F. Bancroft, while another pamphlet<sup>4</sup> described under 'Notes and News' deals with the Migratory Bird Treaty and its Regulations. Bulletin 715<sup>5</sup> of the same Department, by W. L. McAtee is entitled 'Attracting Birds to Public and Semipublic Reservations' and should be in the hands of all park superintendents, as well as those in charge of cemeteries, school grounds, etc. County road supervisors too could learn a valuable lesson from its perusal.

From 'Bird Notes and News' we learn of the increase of insect pests in England owing to the abnormally large areas under cultivation and the decrease in the number of insectivorous birds during severe weather, a condition which brings forth strenuous appeals for the better protection of birds. On the other hand the War Agricultural Committees are advocating the total destruction of the Rooks which are however, known to be at certain seasons very beneficial, and much opposition to the order is manifested.

Mr. Oldys' 'Current Items of Interest'<sup>6</sup> 'The Bluebird'<sup>7</sup> and the

<sup>1</sup> Vol. 35, No. 2, April 1918, pp. 253-4.

<sup>2</sup> Journ. Agr. Research, Vol. 13, No. 2, April 8, 1918, pp. 125-129.

<sup>3</sup> Issued August 19, 1918.

<sup>4</sup> Issued August 26, 1918.

<sup>5</sup> Issued August 12, 1918, price 5cts.

<sup>6</sup> No. 37, June 29, 1918. No. 38, July 1.

<sup>7</sup> Published monthly in co-operation with the Cleveland Bird-Lovers Association, 1010 Euclid Ave., Cleveland, Ohio.